

ABSTRACT**MICROMACHINED GYROSCOPIC SENSOR WITH DETECTION IN THE PLANE OF THE MACHINED WAFER**

The invention relates to a microgyroscope, that is to say an inertial micromechanical sensor dedicated to the measurement of angular velocities, which is produced by micromachining techniques on a silicon wafer. The gyroscope comprises two symmetrical moving assemblies (~~30, 50; 30', 50'~~) coupled via a coupling structure (~~20, 20', 22~~). Each of the two assemblies comprises a moving mass $[(30)]$ surrounded by a moving intermediate frame $[(50)]$. The frame $[(50)]$ is connected to the coupling structure (~~20, 20', 22~~) and can vibrate in two degrees of freedom in orthogonal directions Ox and Oy in the plane of the wafer. The mass $[(30)]$ is connected on one side to the frame and on the other side to fixed anchoring regions (~~34, 36~~) via linking means (~~40-46; 52-58~~) that allow the vibration movement along the Oy direction to be transmitted to the mass without permitting movement of the mass along the Ox direction. An excitation structure $[(70)]$ is associated with the frame in order to excite its vibration along Ox. A movement detection structure $[(90)]$ is associated with the mass $[(30)]$ in order to detect its vibration along Oy.

Figure 1.